Improving farm dams

There are around 1,765,000 farm dams in Australia, including more than 650,000 in the Murray-Darling basin and these are essential infrastructure for many farming operations, including for livestock and irrigation. *https://tinyurl.com/mrmam9se*

Farm dams are more than just water sources, they can become powerful tools for boosting biodiversity, improving water quality, reducing evaporation, and enhancing the overall resilience of your farm. Revegetating around your farm dam can deliver multiple environmental and economic benefits while helping you meet sustainability goals.



Benefits of improving farm dams

Physical & Environmental Benefits:

- **Improved Water Quality**: improved dams have lower levels of nitrogen and lower turbidity, factors which can contribute to algal outbreaks, reduced palatability and animal health issues.

  Where livestock access has been restricted, they have significantly lowercolicounts and fewer thermotolerant (faecal) coliforms (65% of unfenced dams have been found to have coliform counts that exceeded guidelines for water quality for stock). *https://tinyurl.com/57n9nzzc*

  Improved dams support more waterbug species and greater number of individual water bugs than unfenced dams, a good indicator of high-water quality.

- **Enhanced Biodiversity:** vegetation provides habitat for frogs, insects, birds, and beneficial microbes creating a thriving ecosystem that supports increased nutrient cycling, pollination and other ecosystem services.

- **Microclimate Regulation:** trees and shrubs offer shade, reduce evaporation, and lower water temperatures helping to buffer against climate extremes. h*ttps://tinyurl.com/mrmam9se*

  Farmers with improved dams generally saw better water retention in these dams during the 2018-2019 drought with the presence of fringing vegetation shelteringthe dam surface, reducing evaporation from wind.

- **Erosion Control:** planting deep-rooted native grasses and shrubs reduce wind erosion by minimising the amount of bare earth surrounding a dam and stabilize dam banks reducing the risk banks collapsing and extending the life of the dam.

- **Carbon Sequestration:** vegetation, especially deep-rooted natives and woody plants, absorbs and stores carbon in biomass and soil.

- **Emissions Reduction:** dams in poor condition can release large amounts of greenhouse gases, early research is showing that revegetating dams can reduce emissions.

Economic Benefits

- **Reduced Maintenance Costs:** less erosion means fewer repairs and healthier dams require fewer chemical treatments for algae or weed control.

- **Better Livestock Health:** cleaner water means healthier animals and shade and shelter near dams can reduce heat stress in livestock, improving productivity.

Property Value and Aesthetic

- A well-maintained, vegetated dam improves farm appeal and can add long-term value. *https://tinyurl.com/mrmam9se*

- Many farmers report benefits to mental health when spending time in these spaces.

For more information, please call
03 5448 7124 or send through your
enquiry to info@nccma.vic.gov.au
www.nccma.vic.gov.au

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This project is funded by the Australian Government Natural Heritage Trust and delivered by the North Central Catchment Management Authority, a member of the Commonwealth Regional Delivery Partners panel.

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Practical tips for improving farm dams

- **Fencing to exclude or limit livestock access:** allows vegetation to establish and persist around the dam, protects the dam edge from pugging, limits sedimentation and reduces fouling from faeces. Water from dams can be pumped to troughs to allow the dam to be fully fenced or alternatively the dam can be partially fenced to limit stock access and a hardened access point created to minimise pugging, sedimentation and reduce the amount of time stock spend in or around the edge of the water.

- **Revegetate in and around the dam:** once a dam is fenced, vegetation will begin to regrow naturally. Let nature do part of the work.

  Native seeds may already be present in the soil or arrive via wind or wildlife. Where needed, this can be supplemented with strategic planting or seeding, species lists and advice can be obtained from the CMA or Landcare networks. Select a mix of native sedges, reeds, grasses, shrubs, and trees.

  - **Zone 1** (in-water): Reeds, rushes, water plants like Eleocharis (spike sedge), Triglochin (water ribbons).
  - **Zone 2** (banks): Grasses like Themeda triandra (kangaroo grass), Poa labillardieri (tussock grass), Lomandra species.
  - **Zone 3** (surrounds): Shrubs and trees like Acacia, Melaleuca, Eucalyptus viminalis.

  https://tinyurl.com/4p3xr5ra

- **Varying the depth of the dam:** where deep holes and shallow shelves are created these allow for deep storage and water retention and assist in aquatic vegetation establishment and persistence.

- Add an island, snags or logs in the dam to support additional wildlife.



Where to Learn More

- ANU Sustainable Farms – Farm Dams Toolkits and Research: *https://tinyurl.com/744ppyvh*
- AgVic managing dams: *https://tinyurl.com/tn7u469e*
- Greening Aus: *https://tinyurl.com/2fe5v5ab*
- Case study: *https://tinyurl.com/5xmsuvvc*
- Case study: *https://tinyurl.com/3d3hphsu*
- North Central CMA: Waterway Management and Revegetation: *https://www.nccma.vic.gov.au*
- Guidance on fencing & planting: *https://www.ccma.vic.gov.au*

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